

SHATENSHTAYN, A.I., prof.; VYRSKIY, Yu.P., kand. khim. nauk;  
PRAVIKOVA, N.A., kand. tekhn. nauk; ALIKHANOV, P.P.,  
kand. khim. nauk; ZHDANOVA, K.I., kand. khim. nauk;  
IZYUMNIKOV, A.L., mlad. nauchn. sotr.; LEVINSKIY, Yu.V.,  
red.

[Practical laboratory manual on the determination of the  
molecular weights and molecular weight distribution of  
polymers] Prakticheskoe rukovodstvo po opredeleniiu mo-  
lekuliarnykh vesov i molekuliarno-vesovogo raspredeleni-  
nia polimerov. [By] A.I. Shatenshtein i dr. Moskva,  
Khimiia, 1964. 188 p. (MIRA 18:2)

SHATENSHTEYN, A.I. ; VYR-KIY, Yu.P.; RABINOVICH, Yo.A.

Effect of salts on deuterium exchange in liquid ammonia.  
Dokl. AN SSSR 124 no.1:146-149 Ja '59. (MIRA 12:1)

1. Nauchno-issledovatel'skiy Fiziko-khimicheskiy institut imeni  
L.Ya. Karpova. Predstavleno akademikom V.N. Kondrat'yevym.  
(Ammonia) (Deuterium)

5(4)

AUTHORS:

Shatenshteyn, A. I., Vyrskiy, Yu. P.,  
Rabinovich, Ye. A.

SOV/20-124-1-41/69

TITLE:

On the Salt Effect in Deuteron Exchange in Liquid Ammonia  
(O solevon effekte pri deyteroobmene v zhidkom ammiake)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 1, pp 146-149  
(USSR)

ABSTRACT:

The salt effect in deuteron exchange has hitherto hardly been investigated at all. A suitable means of investigating it is liquid ammonia, because it has a low dielectric constant and because it is a good solvent for numerous organic substances and salts. The characteristic features of the influence exercised by salts on the kinetics of the dissolution of lactones, ethers, and halide compounds have already been determined (Ref 1), and the results obtained were also confirmed by other authors. Neutral salts accelerate these reactions all the more, the higher the charge and the smaller the radius of the ions. ( $\text{Ca}^{++} > \text{Sr}^{++} > \text{Ba}^{++}; \text{Li}^{+} > \text{Na}^{+}; \text{Cl}^{-} > \text{Br}^{-} > \text{NO}_3^{-} > \text{J}^{-} > \text{ClO}_4^{-}$ ). The energy  $E$  and the entropy  $\Delta S^*$  of activation are increased. The authors assume that the rules

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On the Salt Effect in Deuteron Exchange in  
Liquid Ammonia

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governing the salt effect in electron exchange and in solvolytic reactions in liquid ammonia are similar to each other. Provisional experiments were carried out with indene and acetophenone, and also systematic experiments were carried out with methyl- $\beta$ -naphthyl-ketone. 0.2 g of this substance were dissolved in  $\sim 2.5$  g ammonia in the presence of a carefully dried salt. The concentration of the salt was  $\sim 2.5$  n, and frequently different salt preparations were used. The experiments carried out without salt lasted 0.5 - 2 hours, but those with salt lasted half an hour. The experiments carried out for the purpose of determining activation energy and activation entropy were carried out with methyl- $\beta$ -naphthyl-ketone, which was partly deuterized in the methyl group. The authors further investigated the manner in which the equilibrium of the production of the colored complexes of 3,5 dinitrobenzoic acid (I) and phenolphthalein (II) with ammonia shifts in the case of the addition of salts. Also the results obtained by kinetic measurements carried out in the case of the presence of 2.5 n ammonium salts are given. The reactions of deuteron exchange are accelerated by salts,

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and, in general, such series of anions and cations continue to hold as have already been found previously in reactions of dissolution in ammonia. Similar series of anions and cations were found also by measuring the equilibrium shift of complex formation. The problem is then investigated as to how the parameters of the Arrhenius equation vary by the addition of a salt. The here discussed deliberations agree well with the rules governing the salt effect in the reactions of deuteron exchange and ammonolysis in liquid ammonia, and they also explain their common features. Further investigations will contribute towards interpreting the phenomena discussed here. The authors thank Corresponding Member, AS USSR, Ya. K. Syrkin and Professor M. B. Neyman for discussions. There are 5 tables and 12 references, 9 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut  
im. L. Ya. Karpova (Physico-Chemical Scientific Research  
Institute imeni L. Ya. Karpov)

Card 3/4

ESKIN, V.Ye.; IZYUMNIKOV, A.I.; ROGOZHKINA, Ye.D.; VYRSKIY, Yu.P.

Composition inhomogeneity of statistical styrene - butyl  
methacrylate copolymers. Vysokom.soed. 7 no.7:1184-1187 J1  
'65. (MIRA 18:8)

1. Fiziko-khimicheskiy institut imeni Kar'ova i Institut  
vysokomolekulyarnykh soyedineniy AN SSSR.

VYRUBAL, VAGALA

CZECHOSLOVAKIA/Physical Chemistry - Surface Phenomena, . . . . . D.  
Adsorption, Chromatography, and Ion Exchange.

Abs Jour : Rež Zhur - Khimiya, No 12, 1958, 39092

Author : Vyrubal, vagala

Inst : -

Title : The Determination of the Specific Surface According to the Sudan R Sorption Method.

Orig Pub : Chem. listy. 1957, 51, No 8, 1429-1434

Abstract : A rapid method for determining the specific surface (S) of powderlike and granulated sorbants by the adsorption of G Sudan R (2-anisol-azo-D-naphthol) from non-polar solvents (toluene). Starting with the S value 100 m<sup>2</sup>/g determined by stearic acid adsorption, the authors found that  $S = G(0.166 \pm 0.013) \text{ m}^2/\text{g}$  (G being expressed in mg/g), for 52 catalysts (ZnO, MgO, Al<sub>2</sub>O<sub>3</sub>, activated charcoal, aluminosilicate). When  $S > 100 \text{ m}^2/\text{g}$ , the method has only a limited value.

Card 1/1

VTRUHALIK, F.

"We Know the Way", P. 4, (TECHNICKÉ NOVINY, Vol. 2, No. 15, Aug. 1954,  
Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, EEAL), IC, Vol. 4,  
No. 1, Jan. 1955, Uncl.



VIRUBOV, A.P., kandidat meditsinskikh nauk (Moscow)

"Ruptures of the urethra." A.A.Rusanov. Reviewed by A.P.Vyrubov.  
Khirurgiia no.8:81-84 Ag '54. (MLRA 7:11)  
(URETHRA--DISEASES) (RUSANOV, A.A.)

CRLIN, A.S., prof.; VYRUBOV, D.N.; ALEKSEYEV, V.P.; KALISH, G.G.;  
KOSTYGOV, N.I.; KRUGLOV, M.G.; KRUTOV, V.I.; MIZERNYUK, G.N.;  
ROGANOV, S.G.; STEPANOV, Yu.A., prof., retsenzent; YEGORKINA,  
L.I., red. izd-va; SOKOLOVA, T.F., tekhn. red.

[Internal combustion engines] Dvigateli vnutrennego sgoraniia.  
Pod red. A.S. Orlina. Moskva, Mashgiz. Vol. 3. [Systems, regula-  
tion, automatic control] Sistemy. Regulirovanie. Avtomatizatsiia.  
1962. 307 p. (MIRA 16:1)  
(Gas and oil engines) (Automatic control)

1ST AND 2ND DEGREE										3RD AND 4TH DEGREE									
PROCESSES AND PROPERTIES MODE																			
<p>ca</p> <p>Loss of heat and evaporation of drops. D. N. Vukobratovic. <i>J. Tech. Phys. (U. S. S. R.)</i> 9, 1923-31 (1930). Air contg. some <math>\text{NH}_3</math> flowed through a pipe in which a ball coated with phosphoric acid was suspended. The amt. of <math>\text{NH}_3</math> absorbed was detd. for various rates of flow and various diams. of pipe and ball. By reason of the analogy between the diffusion of matter and that of heat, these results are used for calcg. the loss of heat by balls in streaming air and the rate of evapn. of water drops. T. T. B.</p> <p>Trans. 1524467, 30 Apr 54</p>																			
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SOV/124-59-4-3975

Translation from: Referativnyy zhurnal. Mekhanika, 1959, Nr 4, p 85 (USSR)

AUTHOR: Vyrubov, D.N.

TITLE: On a Method of Calculating Fuel Evaporation //

PERIODICAL: V kn.: Dvigateli vnutrennego sgoraniya. Moscow, Mashgiz, 1954, pp 20-34

ABSTRACT: The author calculates the evaporation of fuel droplets in internal combustion engines with ignition by compression. The calculation method is based on the assumption of equilibrium isothermal evaporation and on the hypothesis of the non-uniform warm-up of the fuel droplets (along their radius). It gives results which correspond to the experimental results better than previous calculations carried out under the assumption of uniform warm-up of the droplets. In addition to calculating the equilibrium temperature of the droplet and the time needed for its full and partial warm-up, the author analyzes the possibility of applying the recommended method to the calculation of the evaporation of the fuel jet. He adopts the conventional distribution of droplets, obeying the law

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$\Omega = e^{-\frac{x}{x_0}}$ , where  $\xi = x/x_0$  is the relative diameter of the

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On a Method of Calculating Fuel Evaporation

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droplet;  $n = 3-4$  is the characteristic of distribution,  $\Omega$  is the volume part of the droplets that have a diameter larger than  $x$ ; as the "characteristic dimension" the author takes the diameter  $x_0$ , for which  $\Omega = e^{-1}$ . It is shown that the quantities  $n$  and  $x_0$  can be assumed to be constants when solving the problem. From the given examples it follows that: the time of evaporation is approximately proportional to the average temperature of dispersion; an increase of the degree of compression reduces the time of evaporation (the positive effect of the increase of temperature is stronger than the negative effect of the increase of pressure); the great non-uniformity of the spectrum of spraying, which leads to an increase of the rate of evaporation in the initial process, leads to an increase of the duration of the entire process.

G.A. Varshavskiy

Card 2/2

Vyrubov, D. N.

1321 Vyrubov, D. N. Problems of fuel combustion in compression engines

Abstract, describing engine, with Model, etc. etc. etc.

1324

Some results are discussed of tests made by the "Internal Combustion Engines" division of the Moscow Higher Technical

ORLIN, A.S., doktor tekhnicheskikh nauk; VYRUBOV, D.N., doktor tekhnicheskikh nauk.

Brief review of the activities of the Department of Internal Combustion Engines, Moscow Technical College covering the period 1906-1954. [Trudy] MVTU no.35:7-12 '55. (MIRA 9:7)  
(Gas and oil engines)

ORLIN, A., Prof.; VYRUBOV, D., Prof.

Gas and Oil Engines

DVS (Internal combustion engines). Tekh. molod. 21, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.



SHCHUROV, Mikhail Vladimirovich, inzhener-mekhanik; VYRUBOV, D.N., redaktor;  
SHELYAGINA, A.A., redaktor; SKVORTSOV, I.M., ~~tekhnicheskii~~ redaktor.

[Handbook on internal combustion engines] Rukovodstvo po dvigateliam  
vnutrennego sgoraniia. Izd. 3-e, perer. Pod red. D.N.Vyrubova.  
Moskva, Gos. energ.izd-vo, 1955. 480 p. (MIRA 8:5)  
(Gas and oil engines)

ORLIN, A.S., professor; VYHUBOV, D.N.; KOSTYGOV, N.I.; LEBEDEV, S.Ye.  
[deceased]; ROGANOV, S.G.; SIMAKOV, F.P.; CHURSIN, M.M.; PETROV,  
V.A., professor, retsenezent [deceased]; PONOMAREVA, K.A., redaktor;  
MODEL', B.I., tekhnicheskii redaktor

[Internal combustion engines] Dvigateli vnutrennego sgoraniia. Pod  
red. A.S.Orlina. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit.  
lit-ry. Vol.2. [Design and calculations] Konstruktsii i raschet.  
1955. 534 p. (MLRA 9:8)  
(Gas and oil engines)

*VYRUBOV, DMITRIY NIKOLAYEVICH*

PHASE I BOOK EXPLOITATION

326

Orlin, Andrey Sergeyevich; Vyrubov, Dmitriy Nikolayevich, Kalish, German Georgiyevich; Kruglov, Mikhail Georgiyevich; Leonov, Oleg Borisovich, Lebedev, Sergey Yevgen'yevich; Librovich, Bronislav Genrikhovich; Chursin, Mikhail Mikhailovich

Dvigateli vnutrennego sgoraniya. t.1: Rabochiye protsessy v dvigatelyakh i ikh agregatakh (Internal Combustion Engines. v. 1: Working Processes in Engines and Their Units) 2d ed., rev. and enl. Moscow, Mashgiz, 1957. 396 p.

Ed.: (title page): Orlin, A.S., Professor; Reviewer: Mel'kumov, T.M.;  
Ed. (inside book): Yegorkina, L.I., Engineer; Tech. Ed.:  
Tikhanov, A.Ya.; Managing Ed. for Literature on Automobile,  
Tractor and Agricultural Machine-building (Mashgiz): Bauman, I.M.

PURPOSE: This book is written as a textbook for students of institutions of higher learning specializing in internal combustion engines, automobiles, tractors, marine engines and locomotives.

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Internal Combustion Engines. v.1: Working Processes (Cont.) 326

COVERAGE: The authors give a brief historical survey of internal combustion engine development in the USSR and mentions the names of the principal designers and engine types built from 1901 to the present. Theoretical bases of contemporary engine cycles, combustion, intake, supercharging processes, fuel supply and engine control are discussed. The influences of the operational and design factors on the work of the engine are analyzed. Problems of power, efficiency, carburetion, transportation engine characteristics, and the bases of mixture formation in compression ignition engines and gas engines are discussed.

This book is a revised and enlarged edition of Dvigateli vnutrennego sgoraniya (Internal Combustion engines) Vol. I (Mashgiz, 1951). Particularly extensive revisions were made on Chapters III, V and IX. Chapters IV and VII have been rewritten. Chapters I and VII were written by Orlin, A.S.; Chapters II and IV by Vyrubov, D.N.; Chapter III by Vyrubov, D.N. and Leonov, O.B.; Chapter V by Vyrubov, D.N. (Sections 1-7),

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Internal Combustion Engines, v. 1, Working Processes (Cont.)326

Kruglov, M.G. (Section 12), Leonov, O.B. (Section 13) and Chursin, M.M. (Sections 8-11); Chapter VI by Kruglov, M.G. and Leonov, O.B.; Chapters VIII and IX by Kruglov, M.G.; Chapter X by Leonov, O.B.; Chapters XI, XII and XIII by Kalish, G.G. In the preparation of Chapters II, III and V the studies of Lebedev, S. Ye. and Librovich, B.G. were used, and in the preparation of Chapter IX the work of Kalish, G.G. There are 31 references: 28 are Soviet, 2 English and 1 German.

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AVAILABLE: Library of Congress

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6-19-58

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ALIKSEYEV, Valentin Petrovich; VYRUBOV, Dmitriy Nikolayevich; RASSKAZOV,  
D.S., red.; BORUNOV, N.I., tekhn.red.

[Internal combustion piston engines] Porshnevyye dvigateli vnutren-  
nego sgoraniya. Moskva, Gos.energ.izd-vo, 1959. 102 p. (Biblioteka  
teplotekhnika, no.5).  
(Gas and oil engines)

(HRA 13:4)

Vyrubov, D.N.  
11(1); 26(4); p. 3

PHASE I BOOK EXPLOITATION

10V/3049

Moscow. Vyssheye tekhnicheskoye uchilishche

Povysheniye moshchnosti i uluchsheniye ekonomichnosti dvigateley vnutrennego sgoraniya; doklady i soobshcheniya na nauchno-tekhnicheskoy konferentsii kafedry "Dvigateli vnutrennego sgoraniya" MVTU imeni Baumana (Increasing the Output and Improving the Economy of Internal Combustion Engines; Reports and Transactions Presented at the Scientific and Technical Conference Held by the Department of Internal Combustion Engines, MVTU imeni Bauman) Moscow, Mashgiz, 1959. 219 p. Errata slip inserted. 4,500 copies printed.

Ed.: A.S. Orlin, Doctor of Technical Sciences; Ed. of Publishing House: L.I. Yegorkina; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on Automotive, Tractor, and Agricultural Machine Building: I.M. Bauman, Engineer.

PURPOSE: This collection of articles is intended for scientific and engineering personnel of research institutes and machine-building plants.

COVERAGE: The collection contains reports and papers dealing with better

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Increasing the Output (Cont.)

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economy and greater capacities for internal combustion engines. Experimental results are stated and their effectiveness evaluated. The conference took place in 1957. The introduction to the collection contains short summaries of the articles. No personalities are mentioned. References follow several of the articles.

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Introduction

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REPORTS

Charomskiy, A.D. [Doctor of Technical Sciences, Professor]. Some Problems in the Further Development of Soviet High-speed Diesels

7

The author discusses four-stroke and two-stroke locomotive and marine diesel engines. Information on design improvements and new models is given. The conclusions of the author are summarized at the end of the article.

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Orlin, A.S. The Problem of the Development of Layouts for Two-stroke Engines and Computations of Gas Exchange

21

The author analyzes the layouts of two-stroke engines in current use and designs for the arrangement of gas exchange. Methods of computing gas-exchange processes are surveyed. Attention is given to the problems of efficient scavenging and better layouts of gas-distribution mechanisms. Results of an analysis of the gas-distribution process in a YaAZ-204 engine are presented.

Vyrubov, D.M. [Doctor of Technical Sciences, Professor, MVTI imeni Bauman]. Problems of Mixture Formation in Compression-ignition Engines

37

The author analyzes the problem of power output and discusses methods of obtaining most efficient combustion. Effects of cooling media and problems associated with fuel injection are also surveyed.

Malashkin, O.M. [Candidate of Technical Sciences, NATI]. The Question of Using Two-stroke Cycles for Tractor Diesel Engines

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The author compares some typical tractor engines and classifies them according to the method of producing scavenge air. Some typical schemes

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of loop scavenging are evaluated. The types of diesel engines discussed are mostly non-Soviet.

Portnov, D.A. [Doctor of Technical Sciences, Professor, MII]. Optimum Compression in a Transport-type Turbopiston Engine

58

The author analyzes the effects of compression on the basic parameters of turbopiston-engine performance, the relation of compression to supercharging, maximum-pressure values in supercharging, and effects of supercharging pressure on various characteristic pressures in the engine.

Kruglov, M.G. [Candidate of Technical Sciences, MTU imeni Bauman]. Some Possibilities of Increasing the Capacity and Efficiency of Two-stroke Tractor Diesel Engines

73

The author analyzes the effect of the shape of the exhaust cam and of the exhaust-valve timing upon the efficiency of an engine with valve-port scavenging. Other topics discussed in the article include: scavenge efficiency or loop scavenging in a one-cylinder engine, scavenge efficiency computation for a YaAZ-204 engine, and the amount of supercharging in a YaAZ-204 engine.

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Ivanchenko, N.N. [Candidate of Technical Sciences, TsNII]. Contributions of TsNII Toward Improving the Capacities and Efficiencies of Diesel Engines With Divided Combustion Chambers and Turbulence Chambers 89

The article reviews recent achievements in reducing fuel consumption in such diesel engines.

Simakov, F.F. [Candidate of Technical Sciences, Docent, MVTU imeni Bauman]. Maximum Possible Revolutions of a Four-stroke Engine 105

The author surveys some structural possibilities of increasing the r.p.m. coefficient and discusses the effects of the size of inlet nozzle upon the capacity of the engine. Some information is given on gas penetration and methods of computing it.

Simson, A.E. [Candidate of Technical Sciences, Khar'kovskiy zavod transportnogo mashinostroyeniya imeni V.A. Malysheva (Khar'kov Transport Machine-building Plant imeni V.A. Malyshev)]. Steps Being Taken in the Development of Gas-turbine Supercharging in Two-stroke Engines for Diesel Locomotives 123

The author discusses the problem of supercharging in 21-100 engines, mass-produced at this plant. After analyzing some of the systems using superchargers driven by exhaust-gas turbines, he concludes that the most

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efficient and economical method of utilizing exhaust gas is by combining the kinetic energy of the air (transformed into pressure as it leaves the blower wheel) with variable pressure in the outlet. Tests have shown that fuel consumption in this type of engine is 150 to 155 grams per effective-horsepower hour.

Chursin, M.M. [Doctor of Technical Sciences, MVTU imeni Bauman]. Generalized Characteristics of Turbopiston Engines

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The author analyzes factors affecting the performance of turbopiston engines.. Indicator efficiency is computed, and methods of determining performance coefficients are stated.

Dmitriyevskiy, A.V. [Engineer, NAMI]. Double Exhaust as a Device for Increasing Coefficients of Power Output and Economy in Piston Engines

154

The author analyzes discharge coefficients for a four-stroke carburetor engine with the flow of gases through both the exhaust valves and the ports in the lower end of the cylinder. Comparison is made between DN engines, designed for double exhaust, and the standard "Moskvich-402" engine. The author concludes that double exhaust saves 20 percent more fuel.

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TRANSACTIONS

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| The author reports on results of a study of the mixture-formation process by means of high-speed photography.   |     |
| Stolbovskiy, V.V. [Engineer, TsKB]. Some Research Done on Engines With High R.P.M. Coefficients   | 196 |
| The author reports on tests and results obtained with high-r.p.m. engines and outlines some attempts to increase engine performance and fuel economy. Six types of Soviet motorcycle engines (S-154, S-155, S-254, S-257, S-354, and S-555) are analyzed, and their specifications are given. |     |
| Yeganyan, Yu.L. [Engineer, MVTU imeni Bauman]. Study of the Gas-exchange Process in a Dynamic One-stroke Model  | 208 |
| Koz'min, S.Yu. [Engineer, NAMI]. Study of the Interaction Between Two   |     |
| Card 7/8  |     |

L 55255-65 EWT(d)/EPA/EWT(m)/EWP(f)/EWP(r) EWT(c)  
EPA(bb)-2/EWP(1)/EWA(c)/T PI-4/Paa-4/Pa-

ACCESSION NO: AP 011305

UR/0122/65/000/004/0003/0008  
621.436.001.8

AUTHORS: Orlin, A. A. (Meritorious scientist of science and technology, Doctor of technical sciences, Professor); Vyrubov, D. M. (Doctor of technical sciences, Professor)

TITLE: Future development of piston and combined internal combustion engines

SOURCE: Vestnik mashinostroyeniya, no. 4, 1965, 5

TOPIC TERMS: internal combustion engine, piston engine, gas turbine, diesel engine

ABSTRACT: Analysis of future development of power plants indicates that internal combustion engines and, in particular, diesels (along with gas turbines), will play a significant role in the next few decades for applications of up to 25-30 000 hp. The authors discuss the most important areas requiring further development (with emphasis on the diesel). These include: increasing reliability and engine life by systematic improvement of part design and manufacture, new metals and working processes and metal castings; improvement of fuel economy by decreasing heat losses, increasing use of exhaust gas energy, and improving combustion processes; development of closed cycle engines (primarily for maritime

Card 1/3

L 55255-55

ACCESSION NO: AF5011305

applications); investigation of new geometries, including cylinder number and distribution, new compression geometries, etc; increasing engine power by supercharging and higher speed operation; improving automatic engine control for optimum operating conditions; development of gas compressors and expanded use of gas engines in industry and agriculture. The present state of the art is discussed as follows: 1) Low-speed diesels with turbo supercharging have been built with cylinders of up to 930 mm in diameter and up to 30 000 hp in a single engine. Fuel consumption is about 140 g/hp-hr and low speed (125-130 rpm) and low map (10-11 kg/cm<sup>2</sup>) provides operation of up to 30 000 hours between major maintenance. 2) Medium speed engines: 400-700 rpm, 10-15 000 hp, cylinder diameter 350-500 mm, map - 10-12 kg/cm<sup>2</sup>, fuel flow 150-160 g/hp-hr. 3) High speed: 800-1500 rpm, 5000-7000 hp, 150-400 mm diameter, map - 12-15 and higher, 150-160 g/hp-hr. 4) Lightweight turbine-piston diesels for transport (1500-2000 rpm and higher) are being developed by Rolls-Royce, G.M., and others. Although better performance is obtained by mechanically linking the piston engine and turbocharger, the optimum use of turbines and compressors with piston engines is still a matter for discussion. 5) High-speed automobiles and truck engines have been highly developed, particularly by Rolls-Royce, G.M., and Lycoming (G.M. "Continental": 700-750 hp, 2400 rpm, 146 mm piston); their multi-fuel operating capabilities make them very

Card 2/3

1. 55255-65

ACCESSION NR: AP5011305

attractive. The gas turbine as a prime mover still has some limitations but may play an important part in some specific applications.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: PR

NO REF SOV: 003

OTHER: 002

engine building

Card 3/3



VYRUBOV, D.N., prof.; EL'KOTB, M.M., kand. tekhn. nauk

Calculating the speed of an air charge in an engine cylinder.  
Izv. vys. ucheb. zav.; mashinost. no.4:113-117 '65.

(MIRA 18:5)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni  
Baumana.

VOINOV, A.N., doktor tekhn. nauk; ANASHEV, M.D., doktor tekhn.  
nauk, retsenzent; VYRUBOV, D.N., doktor tekhn. nauk, red.

[Combustion processes in high-speed piston engines; fundamentals of the theory of combustion] Protsessy sgoraniia v bystrokhodnykh porshnevnykh dvigateliakh; osnovy teorii goraniia. Moskva, Mashinostroenie, 1965. 211 p.

(MIRA 18:5)

ANDREYEV, B.V.; ARTEM'YEV, S.P.; ARKHANGEL'SKIY, V.M.; AFANAS'YEV, L.L.;  
BABKOV, V.F.; BRONSHTeyN, L.A.; BURKOV, M.S.; BURYANOV, V.A.;  
VARSHAVSKIY, I.L.; VELIKANOV, D.P.; VOINOV, A.H.; VYREBOV, D.H.;  
DORMIDONTOV, A.V.; D'YACHKOV, A.K.; YEFREMOV, V.V.; ZHABIN, V.M.;  
ZELENKOV, G.I.; KALABUKHOV, F.V.; KALISH, G.G.; KRAMARENKO, G.V.;  
KRASIKOV, S.M.; LAKHTIN, Yu.M.; MIKULIN, A.A.; ORLIN, A.S.; OSTROVSKIY,  
N.B.; OSTROVTSOV, A.N.; RUBETS, D.A.; STEPANOV, Yu.A.; STECHKIN, B.S.;  
KHACHATUROV, A.A.; KHOVAKH, M.S.; CHAROMSKIY, A.D.; SHARAPOV, K.A.

Nikolai Romanovich Briling; obituary. Avt.transp. 39 no.4:57  
Ap '61. (MIRA 14:5)

(Briling, Nikolai Romanovich, 1876-1961)

ORLIN, A.S., prof.; VYRUBOV, D.N.; KRUGLOV, M.G.; ROGANOV, S.G.;  
SIMAKOV, F.F.; CHURSIN, M.M.; GALANOVA, M.S., red.izd-va;  
SOKOLOVA, T.F., tekhn. red.

[Internal combustion engines] Dvigateli vnutrennego sgoraniia.  
Pod red. A.S.Orlina. Moskva, Mashgiz. Vol.2. [Design and  
construction] Konstruktsiia i raschet. Izd.2., perer. i dop.  
1962. 379 p. (MIRA 15:11)  
(Gas and oil engines—Design)

ROZHNova, Ye.Ye., inzh.; LIFSHITS, M.M.; VYRVICH, G.P.; IL'YUSHENKO, R.O.

Coals of the Lvov-Volyn Basin. Sbor.DonUGI no.18:53-106  
'59. (Lvov-Volyn Basin--Coal) (MIRA 13:1)

PONOMAREVA, M.N., kand. geol.-mineralog. nauk; LIFSHITS, M.M.;  
VIRVICH, G.P., inzh.

Reflective capacity of Donets Basin coals. Sbor. DonbGI  
no.25:52-95 '62. (MIRA 16:6)

(Donets Basin--Coal--(Optical properties))

SYCHEVSKAYA, V.I.; GRUDTSINA, M.V.; VYRVIKHOVOST, L.A.

Epidemiological significance of synanthropic flies in Bukhara.  
Ent. oboz. 38 no.3:568-578 '59. (MIRA 13:1)

1. Uzbekskiy institut malyarii i meditsinskoy parazitologii i  
Bukharskaya oblastnaya sanitarno-bakteriologicheskaya laboratoriya.  
(BUKHARA--FLIES AS CARRIERS OF DISEASE) (DYSENTERY)

VIRVO, V.M., inzh.

Method of reducing the settlement of shell foundations on sandy  
soils. Sbor. trud. LIIZHT no.225:123-142 '64.

(MIRA 18:8)



YEREPAYEV, A.

Wonderful sprouts. NTO 2 no. 43-45 Ap '60.  
(MIRA 13:6)

(Kuybyshev Province—Agricultural research)

BELOV, Ivan Vasil'yevich; VYRYPAYEV, Aleksey Mikhaylovich; POPOV,  
A.S., red.; VLADIMIRSKAYA, L.S., tekhn. red.

[The scientific and technical department of an enterprise in  
the effort to create new machinery] NTO predpriatiia v bor'-  
be za novuiu tekhniku. Moskva, Profizdat, 1964. 78 p.  
(Bibliotekha profsoiuznogo aktivista, no.4(76))

(MIRA 17:3)

GORDEYENKO, N., aktivist nauchno-tekhnicheskikh obshchestv; KOVALENKO,  
M., aktivist nauchno-tekhnicheskikh obshchestv; VYRYPAYEV, A.

Forgotten decisions. NTO 2 no.7:48-51 J1 '60.  
(MIRA 13:7)

1. Korrespondent redaktsii zhurnala "Nauchno-tekhnicheskiye  
obshchestva SSSR," Kiev.  
(Kiev Province--Technological innovations)

VYRYPAYEV, A.

Without a technical council. NTO 3 no. 1:56-58 Ja '61.

(MIRA 14:2)

(Kuybyshev--Tractors--Electric equipment)

VYRYPAEV, A.

The way of the brave, MTO 4 no.8:26-29 Ag '62. (MIRA 15:8)

1. Spetsial'nyy korrespondent zhurnala "Nauchno-tekhnicheskiye  
obshchestva SSSR".

(Krasnoyarsk--Bridge construction)

VYRYPAYEV, A.

Creative objectives of the primary organization. NTO 3 no.3:32-34  
Mr '61. (MIRA 14:3)

(Leningrad—Machinery industry)

VYRYPAZEV, A.

The Likhachev Automobile Plant will be a model enterprise. NTO  
2 no.9:45, 48-54 S '60. (MIRA 13:9)  
(Moscow—Automobile industry)

VYRYPAYEV, A.; KOMECH, I.; NIKOLAYCHIK, N.

Serious shortcomings in the work of the central committee of  
the trade union of the petroleum industry workers. Sov.prof-  
soizy 4 no.1:41-45 Ja '56. (MLRA 9:4)  
(Mukhanovo--Trade unions)



VYRYPAYEV, Aleksey Mikhaylovich, zhur.; LUTAY, Nikolay Vladimirovich;  
POPOV, A.S., red.; ZNYTSEVA, L.A., tekhn. red.

[Primary organization of a scientific and technical society]  
Pervichnaia organizatsiia nauchno-tekhnicheskogo obshchestva.  
Izd-vo Profizdat, 1962. 62 p. (Bibliotekha profsoiuznogo  
aktivista, no.20(44)) (MIRA 15:11)

1. Predsedatel' organizatsii Nauchno-tekhnicheskogo obshchestva Tagenrofskogo kombaynovogo zavoda (for Lutay).  
(Efficiency, Industrial)

VYRYPAYEV, N. S.

Subject : USSR/Electricity

AID P - 795

Card 1/1 Pub. 28 - 5/11

Author : Vyrypayev, N. S.

Title : Economical conditions for transformer operations

Periodical : Energ. byul., #7, 20-22, 31 1954

Abstract : The increase of transformer losses with the time of service is discussed. Graphical and analytical determination of losses are presented and specific losses related to the maximum loads are presented for computation in the form of curves. Chart, two tables, three numerical examples and two Russian references (1946 and 1953).

Institution : None

Submitted : No date

VYRYPAYEV, N.S.

Economical operation of transformers. Energ. biul no.7:20-22  
Jl '54. (MIRA 7:7)  
(Electric transformers)

1. VYRYPAEV, N. S.
2. USSR (600)
4. Electric Power Distribution
7. Certain problems of designing and building structure for electric power supply to oil fields. Energ.bul., no. 1, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

VYRIPAYEV, M.S.

Selecting the most effective lay-out for electric networks in  
oil fields. *From.energ.* 15 no.5:52-57 *My* '60.  
(MIRA 13:7)

(Electric networks) (Oil well drilling)

1. VYHYPAYEV, N. S.
2. USSR 600
3. Petroleum Industry
7. Certain problems of designing and building structure for electric power supply to oil fields, Energ. biul. No. 1, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

1. VYRYPAYEV, N. S.
2. USSR (600)
4. Electric Power Distribution
7. Power loads and graphs for power loads of petroleum plants.  
Energ. biul. No. 8, 1952.
9. Monthly List of Russian Accessions, Library of Congress, January 1953, Unclassified.

VYRYPAYEV, N. S.

Electric Power Distribution

Voltage losses in petroleum refineries and petroleum production networks, Energ. biul, no. 2, 1952.

SO: Monthly List of Russian Accessions, Library of Congress, May 195<sup>2</sup>, Uncl.



VYRYSHEV, VASILII FILIPPOVICH

Epp  
.R92:42

Tsekh Rabotayet po Chasovom Grafiku  
(The Plant Works On an Hour's Graph)  
Moskva, Profizdat, 1955.

60 p.

VYRYSHEV, Vasilii Filippovich; LYSYY, A., redaktor; GOLICHENKOVA, A.,  
tekhnicheskii redaktor

[The shop works on an hourly production chart] TSekh rabotaet po  
chasovomu grafiku. [Moskva] Izd-vo VTsSPS Profizdat, 1955. 60 p.  
(Efficiency, Industrial) (MIRA 9:2)

VYRZHIKOVSKAYA, A. V.

"Examination of Practical Methods Used at Observation Points for Estimation  
of Cotton Pests and Diseases,"  
Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta  
Zashchity Rastenii za 1935 Goda, 1936, pp. 528-530. 423.92  
1541

So: Sira- Si - 90 - 53, 15 Dec. 1953

VYZHIKOVSKAYA, A.V.:

Gall wasps (Hymenoptera, Cynipoidea, Cynipinae) of Leningrad  
Province. Trudy Zool. inst. 31:138-171 '62. (MIRA 16:1)  
(Leningrad Province—Gallflies)

VYRZHIKOVSKAYA, A.V.

Phytophagous gallflies (Hymenoptera, Cynipinae) along the central  
course of the Ural River. Trudy Zool. inst. 16:382-403 '54.  
(Ural Valley--Gallflies) (MIRA 8:6)

VOVEYKOV, G.S.; VYZHIKOVSKAYA, A.V.; RUDOL'F, V.P.; SHTEYNBERG, D.M.

Experiment in producing an artificial population of bumblebees  
to increase the production of red clover seed. Trudy Zool. inst.  
24:247-270 '58. (MIRA 11:10)

(Bumblebees) (Clover) (Seed industry)

GRITSMAN, Yu.Ya; BOBROV, B.S.; VYRZHIKOVSKAYA, M.F.; KRYUCHKOVA, G.S.

Experience in using an apparatus for side-to-side gastrointestinal anastomoses in an experiment and in the clinic. Trudy NIIKHAI no.5:92-96 '61. (MIRA 15:8)

1. Nauchno-issledovatel'skiy institut eksperimental'noy khirurgicheskoy apparatury i instrumentov.  
(SUTURES) (STOMACH—SURGERY) (INTESTINES—SURGERY)

VYZHIKOVSKAYA, A.V.

New gall wasps (Hymenoptera, Cynipidae) from the wild rose of  
Central Asia and Kazakhstan. Ent. oboz. 42 no.3:651-659 '63.  
(MIRA 17:1)

1. Zoologicheskii institut AN SSSR, Leningrad.



VYRZHIKOVSKAYA, M.F.; KRIVCHENKOV, G.M.

Instruments and devices for clinical radiology. Trudy NII EKHA I  
no.5:307-310 '61. (MIRA 15:8)

1. Nauchno-issledovatel'skiy institut eksperimental'noy khirurgi-  
cheskoy apparatury i instrumentov.  
(RADIOLOGY, MEDICAL--EQUIPMENT AND SUPPLIES)

VYRZHIKOVSKAYA, M.F.

Diagnosis of peptic ulcer according to clinico-roentgeno-anatomical comparisons. Khirurgiia, Moskva no.12:15-22 Dec 1953. (GML 25:5)

1. Candidate Medical Sciences. 2. Of the Roentgen Division (Head -- M. P. Vyrshikovskaya) of the Fourth Municipal Clinical Hospital (Head Physician -- P. G. Demidov).

VYRZHIKOVSKAYA, M.F., kandidat meditsinskikh nauk, zaveduyushchiy; DEMIDOV, P.O., glavnyy vrach; REYNBERG, S.A., professor, nauchnyy rukovoditel', zasluzhennyy deyatel' nauki.

Functional motor disorders of the duodenum. Klin.med. 31 no.9:60-64 S '53.  
(MIRA 6:11)

1. Rentgenovskoye otdeleniye 4-y gorodskoy klinicheskoy bol'nitsy (for Vyrzhikovskaya). 2. Chetvertaya gorodskaya klinicheskaya bol'nitsa (for Demidov and Reynberg).  
(Duodenum--Ulcers)

VYZHIKOVSKAYA, Mariya Fortunatovna

Academic degree of Doctor of Medical Sciences, based on her defense, 18 April 1955, in the Council of 2nd Moscow State Med Inst imeni Stalin; of her dissertation entitled: "Peritonites and abscesses of the abdominal cavity under clinic-roentgenological light."

Academic degree and/or title: Doctor of Sciences

SO; Decisions of VAK, List no. 5, 3 Mar 56, Byulleten' MVO SSSR, No. 2, Jan 57, Moscow, pp 17-20, Uncl. JPRS/NY-466

VYRZHNIKOVSKAYA, M.F. kandidat meditsinskikh nauk (Moskva)

Motor disorders of duodenum in calculous cholecystitis. Klin.  
med.33 no.6:53-63 Je '55. (MLRA 8:12)

1. Iz rentgenologicheskogo otdeleniya 4-y Gorodskoy klinicheskoy  
bol'nitsy (zav.-otdeleniyem M.F.Vyrzhikovskaya, nauchnyy rukovo-  
ditel'-zasluzhennyy deyatel' nauki prof. S.A.Reynberg)

(DUODENUM, dis.

motor disord. causing calculus cholecystitis)

(CHOLECYSTITIS

calculous, caused by duodenal motor disord.)

IVANOVA, L.N.; SEMENOV, A.G.; MUSHEGYAN, S.A.; VYZHIKOVSKAYA, M.F.

Experiments with a microelectromanometer for measuring intra-  
cardiac pressure. Eksper.khir. 2 no.2:43-46 Mr-Apr '57.  
(MIRA 12:8)

1. Iz Nauchno-issledovatel'skogo instituta eksperimental'noy  
khirurgicheskoy apparatury i instrumentov (dir. M.G.Anan'yev).  
(BLOOD PRESSURE, determ.

intracardiac, exper. microelectromanometry (Rus))

Vyrzhikovskaya, M. F.

"A roentgenological method of examination and control of  
apparatus for surgical suturing." Novye khirurgicheskie apparaty  
i instrumenty i opyt ikh primeneniya, No. 2, ~~1958~~, p. 46  
1958

VYRZHNIKOVSKAYA, M.F., doktor med.nauk., OKULICH, T.A., IEPISKAYA, Ye.S.

Röntgenological diagnosis of adenomatosis of the lungs [with summary  
in English]. Vest.rent.i rad. 33 no.4:3-7 J1-Ag '58 (MIRA 11:8)

1. Iz rentgenologicheskogo otdeleniya (zav. - doktor med.nauk M.F.  
Vyrzhnikovskaya) 4-y klinicheskoy bol'nitsy (glavnyy vrach- zaslyzhenyy  
vrach RSFSR M.V. Ivanyukov), Moskva.

(LUNG NEOPLASMS, diag.

adenomatosis, x-ray diag. (Rus))



VYZHIKOVSKAYA, H.F. (Moskva)

Experimental X-ray observations on tantalum staples placed on the gastric stump with an apparatus for double-row mechanical suture. Eksp.khir. 4 no.3:38-39 Iy-Je '59. (MIRA 12:8)  
(GASTRECTOMY, exper.

tantalum staples on gastric stump with appar.  
for double row mechanical suture in dogs (Rus))

Vydra, F.

7  
 Coordination compounds of oleic and elaidic acids with  
 palladium chlorides. F. Čata and F. Vydra (Vysoká škola  
 chem. technol., Prague). Collection. Czech. Chem. Com-  
 muns. 25, 687-76(1960)(in German).—On the basis of in-  
 frared spectra measurements of the coordination compds. of  
 PdCl<sub>2</sub> with oleic (I) and elaidic acids in nonaq. solvents, it  
 was found that the compds. are dimeric and bonded both  
 by H bonds of the carboxyl groups and by coordination with  
 PdCl<sub>2</sub>, so that Pd is coordinatively quadrivalent. The 4th  
 ligand is the double bond. The compd. of I is more stable  
 than that of II. The Et ester of I is the least stable of all  
 3 compds.

M. H. H. H.

4  
 99(1/2)

sh

VYRZHIKOVSKAYA, M.F.; KUTINOVA, Ye.P.

New models of instruments for radio-isotope treatment of cancer of the base of the tongue and the oral cavity.  
Med. rad. 7 no.12:61-63 D'62. (MIRA 16:10)

1. Iz meditsinskogo otdela Nauchno-issledovatel'skogo instituta eksperimental'noy khirurgicheskoy apparatury i instrumentov Ministerstva zdravookhraneniya SSSR.

\*

VYZHIKOVSKAYA, Mariya Fortunatovna; AL'TSHULLER, L.I., red.;  
LYUDKOVSKAYA, N.I., tekhn. red.

[X-ray diagnosis of duodenal diseases] Rentgenodiagnostika  
zabolevanii dvenadtsatiperstnoi kishki. Moskva, Medgiz,  
1963. 251 p. (MIRA 16:7)

(DUODENUM—RADIOGRAPHY)

VYRZHIKOVSKAYA, M.F.; SHRAMENKO, A.I.

New technic in the treatment with radioactive preparations of cancer of the female genitalia. Med.rad. no.5:62-68 '62.

(MIRA 15:8)

1. Iz Nauchno-issledovatel'skogo instituta eksperimental'noy khirurgicheskoy apparatury i instrumentov Ministerstva zdravookhraneniya SSSR i Kiyevskogo nauchno-issledovatel'skogo rentgenoradiologicheskogo i onkologicheskogo instituta.

(RADIOTHERAPY) (GENERATIVE ORGANS, FEMALE--CANCER)

VIRZHNIKOVAYA, N. F., KATICHENKO, M. S., SUTINOV, M. M., A. M. V. S.,  
ANDROSOV, P. I.

Experimental prerequisites for clinical use of the apparatus for suturing  
the stomach stump. .... 117

Novye khirurgicheskie apparaty i instrumenty i opyt ikh primeneniye (New  
SURGICAL Equipment and Instruments and Experience in Their Use) NO. 1,  
Moscow, 1957 A collection of Papers of the Scientific Research Inst.  
for Experimental Surgical Equipment and Instruments.

*NIIEKA ALL*

VYRZHNIKOVSKAYA, M.F., doktor med.nauk (Moskva)

Clinical x-ray diagnosis of ruptures of the spleen and their complications. Klin.med. 37 no.11;104-112 N '59. (MIRA 13:3)

1. Iz 4-y Gorodskoy klinicheskoy bol'nitsy (glavnyy vrach M.V. Ivan-yukov) i Nauchno-issledovatel'skogo instituta eksperimental'noy khirurgicheskoy apparatury i instrumentov Ministerstva zdravookhraneniya SSSR (dir. M.G. Anan'yev).  
(SPLEEN diseases)

SOV/84-59-10-14/53

AUTHOR: Vyshedskiy, M., Editor

TITLE: Flight After Flight

PERIODICAL: Grazhdanskaya aviatsiya, 1959, Nr 10, p 10 (USSR)

ABSTRACT: This is a short note in praise of a helicopter subunit of the Uzbekskoye upravleniye GVF (Uzbek Administration of the GVF) that took part in the evacuation of 300 inhabitants from areas flooded by the Psken, Chirchik and Angren rivers. The subunit commander, A. Taymetov, deputy subunit commanders Ya. Madzha, and V. Suchkov, the pilots N. Kamalov, Yu. Normatov, V. Tel'nov, and S. Tin, aircraft technicians G. Brovko, V. Lemeshko, G. Pogrebnyak, Yu. Belov and Sh. Simayev, engineer P. Senkevich, the aircraft mechanics V. Kolodeznev, V. Uralayev, N. Alimov, and M. Abdullayev have been commended in an order signed by the chief of the Glavnoye upravleniye GVF (Main Administration of the GVF).

ASSOCIATION: "Kryl'ya Vostoka" (Newspaper "Wings of the East")  
Card 1/1



VYSANYAYE, A. I.

"The Action of Diphtheria Toxin in the Formation of Necrotic Foci in the Liver (Experimental Morphological Investigation)." Cand Med Sci, Tartu State U, Tartu, 1954. (RZhBiol, No 4, Feb 55)

SO: Sum. No. 631, 26 Aug. 55 - Survey of Scientific and Technical Dissertation Defended at USSR Higher Educational Institutions.  
(14)

VYSAMYAE, A. Yu. [Võsamyä, A.]

Cancerogenic action of shale oil soot on white mice [with summary  
in English]. Vop.onk. 4 no.4:408-411 '58 (MIRA 11:9)

1. Iz Instituta eksperimental'noy i klinicheskoy meditsiny  
(dir. -kand.med.nauk P.A. Bogovskiy) AN Estonskoy SSR. Adres avtora:  
Tallin, ul. Liyva, d. 18/20, Institut eksperimental'noy i  
klinicheskoy meditsiny AN Estonskoy SSR.

(CARCINOGENS, eff.

cancerogenic eff. of shale oil soot in mice (Rus))  
(PETROLEUM PRODUCTS, eff.

same (Rus))

VYSATOVA, V.

"Pharmacologically interesting pyridine derivatives. X. A thiocyanalkyl esters of nicotinic acid." Ceskosloveska Morfologie, Praha, Vol. 48, No. 5, May 1954, p. 685.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954 L.C.

VYSHINSKIY, A. M.

The effect of fertilizers on some biochemical properties and yield of lupines poor in alkaloids. A. M. Vyshinskiy, M. P. Zuhirskova, and Yu. B. Lysyi. Nauch. Trudy Ukr. Nauch.-Issledovatel. Inst. Sotriz. Zemledel'ya 7, 132-42 (1954); Referat. Zhur. Khim., Biol. Khim. 1955, No. 6753. A study was made of the effect of K, P + K, N + P + K, and P + K + B on the no. of seeds and their N, P + K, and alkaloid contents in Vello variety. With any of the fertilizer formulas used, P and N accumulated mostly in the fruits (as compared with the straw) towards the end of the period of growth. P + K + B increased the bulk of the crop but reduced the alkaloid content. These effects were reversed with N-type fertilizers. B. S. Levine

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VYSATOKA, V.

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Pyridine derivatives of pharmacological interest. IX.  
New pyridyl derivatives possessing peripheral vasodila-  
tor activity. Zelenka J., Vojtisek, Václav Tělný, J. Hejny  
and V. Vysatoka. Collection Czechoslov. Chem. Commun.  
19, 1541-52 (1954 in German). - See C.A. 49, 3954y.  
B. J. C.

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*Pyridine derivatives of pharmacological interest. IX.*  
New  $\beta$ -picolyl derivatives possessing peripheral vasodilator activity. Zdeněk J. Věštek, Václav Trčka, J. Hejzler, and V. Vrbatý. *Výzkumný ústav farm. biochem. Práha, Czech. J. Chem. Lett.* 45, 438-41 (1954); *Ch. L.A.* 49, 1034f.  $\beta$ -Picolymercaptan (0.02 mole), b.p. 115-22°, n<sub>D</sub><sup>20</sup> 1.5736, in 5 ml. EtOH was poured into a 0.02 mole Na in 10 ml. EtOH, the mixt. treated dropwise with 0.022 mole alkyl halide, refluxed 3 hrs., the EtOH distd. off, the residue dissd. with 30 ml. CCl<sub>4</sub>, filtered, and the filtrate distd. Alkyls, yields in %, b.p., n<sub>D</sub><sup>20</sup>, and m.p. of the pierates (or dipicronates) are given. Pierates: Me, 62, 114, 1.5630, 124; Et, 62, 123, 1.5529, 95; Pr, 73, 138, 1.5010, 139; iso-Pr, 63, 127, 92; Bu, 69, 142, 1.4998, 82; iso-Bu, 64, 138, 1.4991, 140; 1.4977, hexyl, 72, 148, 1.4981, 82; cyclohexyl, 68, 143, 1.4695, 154; PhCH<sub>2</sub>, 92, 175, 1.5939, 119. Picronates: Me, NCH<sub>3</sub>, CH<sub>3</sub>, 71, 142, 1.5413, 190; Et, NCH<sub>2</sub>CH<sub>3</sub>, 74, 153, 1.5351, 163; Me, NCH<sub>2</sub>MeCH<sub>3</sub>, 76, 153, 1.5297, 191; Et, NCH<sub>2</sub>MeCH<sub>3</sub>, 72, 168, 1.5632, 169. The pierates and picronates were crystd. from EtOH-Me<sub>2</sub>CO. 2-Hydroxyethyl nicotinate (20 g.) treated in 100 ml. CHCl<sub>3</sub> with 30 ml. SOCl<sub>2</sub> in 50 ml. CHCl<sub>3</sub> gave HCl salt of 2-chlorethyl nicotinate, m. 108° (from Me<sub>2</sub>CO), which gave by alkalization with Na<sub>2</sub>CO<sub>3</sub> and extrn. with CCl<sub>4</sub> 25.8 g. (60%) 2-chlorethyl nicotinate (I), b.p. 128-30°, m. 29°, n<sub>D</sub><sup>20</sup> 1.5302. I (9.30 g.) dissolved in 70 ml. CCl<sub>4</sub> was added to a soln. prepd. by refluxing 8 hrs. 5.5 g. 3-pyridylcarbinol with 1.15 Na dust in 350 ml. CCl<sub>4</sub>, the mixt. was refluxed 9 hrs., the NaCl filtered off, and the filtrate distd. to give 0.5 g. (60%) 2-( $\beta$ -picolyloxy)ethyl nicotinate, b.p. 161-3°, b.p. 155°, n<sub>D</sub><sup>20</sup> 1.4991, dipicronate, m. 181°. All compds. were tested for their peripheral vasodilating, and some for their antihistaminic and spasmolytic activities. M. Hudlický

VYSATOVA, VACLAV

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Thiothio derivatives of pharmacological interest. X.  
Thiothioanalogues of nicotinic acid. Zdeněk I.  
Václav, Václav Trávník, and Václav Vysatová (Vysatová  
Inst. farm. biochem., Prague) *Chem. Zvesti* 48, 883 (1974); *Chem. Abstr.* 69:517. The reactions of HSCN with  
alkylene oxides, and of KSCN with alkylmethylchlorohydrins  
yielded a series of  $\alpha$ -thiocyanato alcohols, which reacted with  
nicotinoyl chloride (II) to give the corresponding  $\alpha$ -thio-  
cyanoalkyl nicotinates. Their toxicity and effect on blood  
pressure were investigated.  $\text{HOCH}_2\text{CH}_2\text{SCN}$  and  $\text{MeCH}_2\text{SCN}$   
 $\text{CH}_2\text{OH}$ , resp., were prepd. by treating the oxides  
with an excess of HSCN, the other thiothioanalogues  
by refluxing a mixt. of 0.05 mole chlorohydrin, 0.05 mole  
KSCN, and 12 ml. EtOH 6 hrs. at 100-5°. Dig. with 30 ml.  
 $\text{H}_2\text{O}$ , filtering off the KCl, drying the filtrates with  $\text{Na}_2\text{SO}_4$ ,  
evaporating the solvent, adding 0.5 g. hydroquinone, and  
distilling under reduced pressure. Mixing 0.05 mole thiothioanalogues in 30  
ml.  $\text{CH}_2\text{Cl}_2$  with a soln. contg. 7.44 g. (0.25 mole)  $\text{C}_6\text{H}_6$ , refluxing  
the mixt. 30 min., collecting the deposited crystals of the

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ester hydrochloride, dissolving them in 10 ml. H<sub>2</sub>O, acidified with 2 ml. HCl, washing the soln. with 25 ml. Et<sub>2</sub>O, alkalinizing the aq. layer with 20% Na<sub>2</sub>CO<sub>3</sub> satg, the ester with ether, and obdg. the ext. yielded the *nitrolic esters* of the corresponding thiocyanatopyridines (the starting *thiocyanatopyridine*, its % yield, b.p., and m.p., the % yield, b.p., and m.p. of the ester, and the m.p. of the picrate of the ester given): NCSCH<sub>2</sub>CH<sub>2</sub>OH, 55, b. 1112-13°, 1.5118, 80, —, — (ester, m. 77°); NCSCH<sub>2</sub>AOH, 68, b. 83°, 1.4941, 60 (ester, m. 44°), b. 182°, 1.5499, 79°; MeCH<sub>2</sub>(SCN)CH<sub>2</sub>OH, 48, b. 129-2°, 1.5050, 77; b. 143°, b. 146°, 1.5470, 101°; NCS(CH<sub>2</sub>)<sub>3</sub>OH, 50, b. 128-9°, 1.5004, 64, b. 160°, 1.5431, 75°; NCS(CH<sub>2</sub>)<sub>4</sub>OH, 53, b. 124-6°, 1.4958, 62, —, 1.5420, 151°; NCS(CH<sub>2</sub>)<sub>5</sub>OH, 78, b. 135-6°, 1.4933, 60, —, 1.5410, 78°. XI. Basic esters of 3-pyridylcarbinol. *Ibid.* 1221-4. — 3-Pyridylcarbinol (b. 92-4°, n<sub>D</sub><sup>20</sup> 1.5355) (2.3 g.) dissolved in 30 ml. CCl<sub>4</sub> was added at 70° to 0.40 g. Na covered with 150 ml. CCl<sub>4</sub>, the mixt. was stirred 3 hrs., the Na salt sepd., washed with CCl<sub>4</sub>, suspended in 150 ml. CCl<sub>4</sub>, and treated with 0.022 mole of amylalkyl chloride in 30 ml. CCl<sub>4</sub>, the mixt. refluxed 14



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hrs., filtered from NaCl and distd. *in vacuo*. The following 3 pyridylmethyl nialin-substituted alkyl ethers were prepd. (9% yield, b.p., and *n<sub>D</sub>* given):  $\text{CH}_3\text{CH}_2\text{NMe}$ , 69, b, 103°, 1.5090;  $\text{CH}_3\text{CH}_2\text{NEt}$ , 73, b, 109°, 1.5023;  $\text{CH}_3\text{CH}_2\text{NMe}$ , 75, b, 110°, 1.5023;  $\text{CH}_3\text{CH}_2\text{NEt}$ , 69, b, 116°, 1.5040;  $\text{CH}_3\text{CH}_2\text{NMe}$ , 68, b, 1.5023;  $\text{CH}_3\text{CH}_2\text{R}$  (R = morpholino), 62, b, 126°, 1.5100. These ethers lower the blood pressure less than their S analogs and their toxicity is lower. Antihistaminic and anemolytic effect is much weaker than with the derivatives containing a benzene ring instead of the pyridine ring.

M. Hunkler

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VYSCOCANSKY, M.

"Characteristic Static Values of the Electron Tube", P. 288, (TECHNICKA  
PRACA, Vol. 6, No. 5, May 1954, Bratislava, Czechoslovakia)

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